



SFUND RECORDS CTR  
2166-00995

SFUND RECORDS CTR  
88130416

September 9, 1987

California Regional Water  
Quality Control Board  
Los Angeles Region  
107 South Broadway, Suite 4027  
Los Angeles, CA 90012-4596

REVISED  
WORK  
PLAN

Attention: Mr. Dainis Kleinbergs

Subject: Revised Work Plan - 2835 N. Naomi St., Burbank, CA

Dear Mr. Kleinbergs:

Please find enclosed a revised work plan for continuing the subsurface investigation at 2835 North Naomi Street, Burbank, California. OTI believes this plan, when implemented, will meet the requirements delineated by Roy Sakaida in his letter of 17 June 1987 regarding the same subject.

Once we receive your approval of this plan, OTI is prepared to proceed with its implementation. Should you have any questions or comments, OTI is willing to meet with you at your convenience.

Very truly yours,  
OCEAN TECHNOLOGY, INC.

E. Palic  
Plant Engineer

cc: T.F. Mulvaney

S.J. Pratt-Brown & Caldwell

LOS ANGELES REGION  
QUALITY CONTROL BOARD  
87 SEP 10 AM 10:22

BROWN AND CALDWELL



CONSULTING ENGINEERS

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September 8, 1987

Mr. Eugene Palic  
Ocean Technology, Inc.  
2835 North Naomi Street  
Burbank, California 91504

12-3526-01

Subject: Site Investigation and Remediation Workplan,  
Ocean Technology, Inc., (OTI) Burbank, California

Dear Mr. Palic:

This report is intended to present a workplan for the investigation and cleanup of soils and groundwater potentially contaminated from the contents of one 550-gallon underground storage tank. This tank was used to store spent trichlorethane (TCA) and isopropyl alcohol at the OTI facility located at 2835 North Naomi Street in Burbank, California. A vicinity map for the site is presented in Figure 1.

### Introduction

In September of 1985, the removal of one 550-gallon underground storage tank used to store spent trichlorethane and isopropyl alcohol began but the tank was punctured during the removal. The Los Angeles County Department of Public Works (LACDFW) representative ordered the tank placed back into the ground and covered. Since that time, three consultants have been retained to conduct site investigations. The first consultant (Gregg and Associates) advanced two soil borings to a depth of 40-feet and collected soil samples. The results of analyses on these samples indicated a high amount of TCA concentration in one boring. A second consultant (CH<sub>2</sub>M Hill) advanced one soil boring to a depth of 82-feet and collected soil samples. The results of analyses on these samples indicated concentrations, at depth of 30-feet, of acetone, isopropyl alcohol and oil and grease, but no TCA.

LOS ANGELES REGION  
QUALITY CONTROL  
JAN 1988

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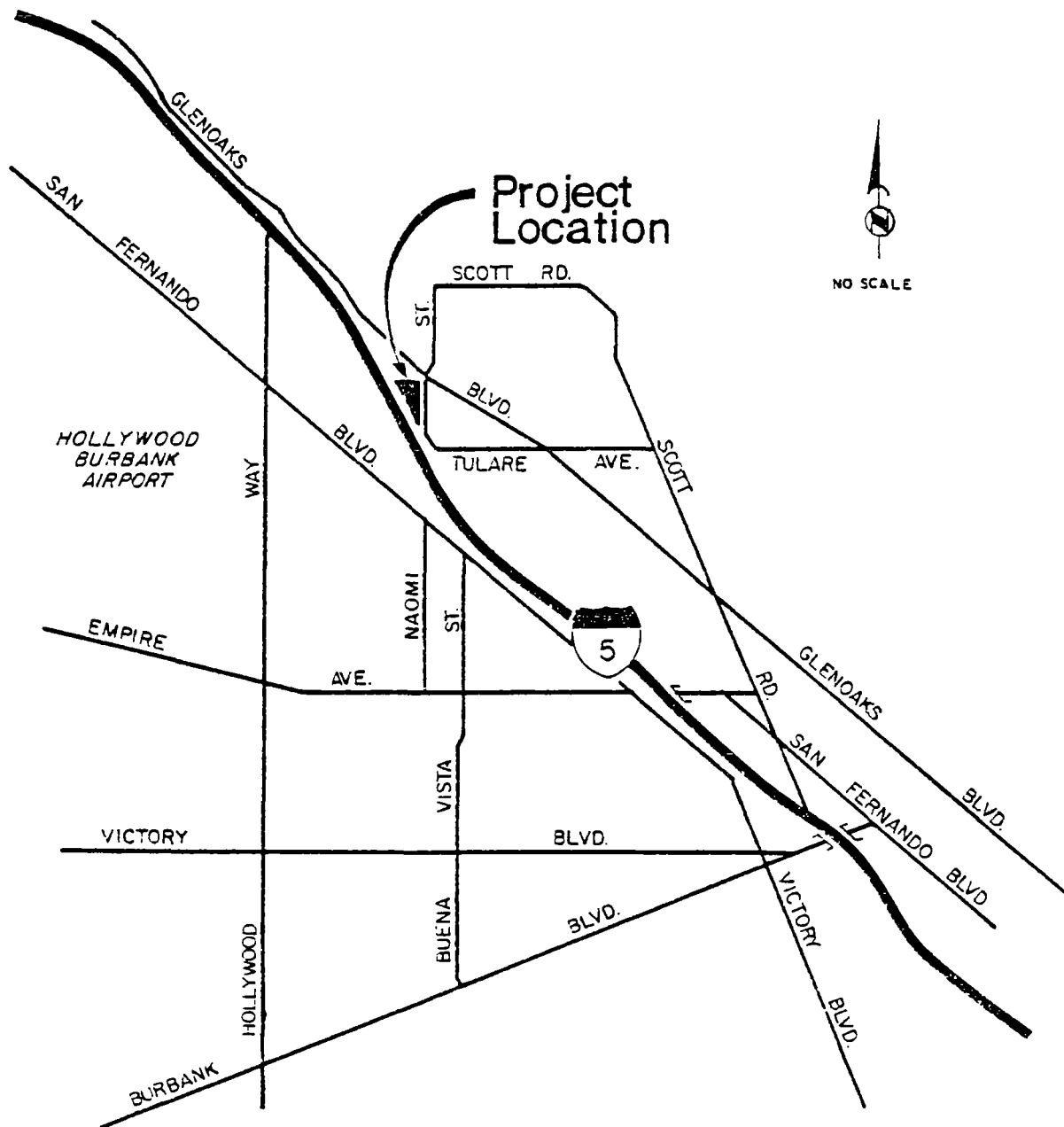


Figure 1 Vicinity Map

A third consultant (Harding Lawson Associates) was retained, in May of 1986, to analyze the data collected by the first two consultants. Their conclusions suggested that the seepage from the tank was probably less than 200 gallons and that there would be little likelihood that it had migrated to the groundwater. The Harding Lawson review, which contains all borelogs and sample results thus far submitted, is included in Appendix A. The tank was removed in September of 1986 and samples were collected from the stockpile and bottom of the excavation. The results of two samples collected from the bottom of the excavation indicated concentrations of 5 and 6 mg/kg for TCA and 3 and 10 mg/kg for C-3 chlorinated hydrocarbon. No other constituents were detected from the method analyzed for (EPA Method 8240). The laboratory report for these samples and the tank removal documentation are included in Appendix A.

In March, 1987, a proposal for a vapor monitoring well was presented by OTI to the LACDPW. In April, 1987, LACDPW transferred responsibility for the cleanup to the Los Angeles Regional Water Quality Control Board (LARWQCB).

In June of 1987, the LAWQCB responded to the March proposal with requirements for an additional workplan which would offer conclusive evidence regarding the origin of any soil contamination which exists at the tank site. Brown and Caldwell Consultants were retained by OTI in August, 1987, to submit the site assessment workplan and complete the investigation.

#### Site Assessment Work Plan

Figure 2, a facility map of the Ocean Technology Inc., indicates the location of the 550-gallon underground storage tank excavation. Figure 3 is a site plan of the facility which shows the locations of all previous and proposed soil borings.

Three soil borings are proposed at the locations indicated in the site plan (Figure 3). The location of each proposed boring is based on subsurface soil conditions using previous soil boring information from the above mentioned three consultants. In addition, data from borings OTI-B1 and OTI-B2, drilled by Gregg and Associates in November, 1985, will be used to supply information about the subsurface soil conditions, to a depth of 40-feet, for the north-east and south-west sides of the former underground tanks location.

Borehole BC-1 is to be advanced at the center of the previous underground tank location. This location is recommended because information from previous borings indicate that the subsurface soils are predominantly coarse sands, gravels, and silty sands which would likely allow leakage from the tank to travel vertically downward, and would be contacted by the borehole. Due to this location, it would be required that the tank excavation

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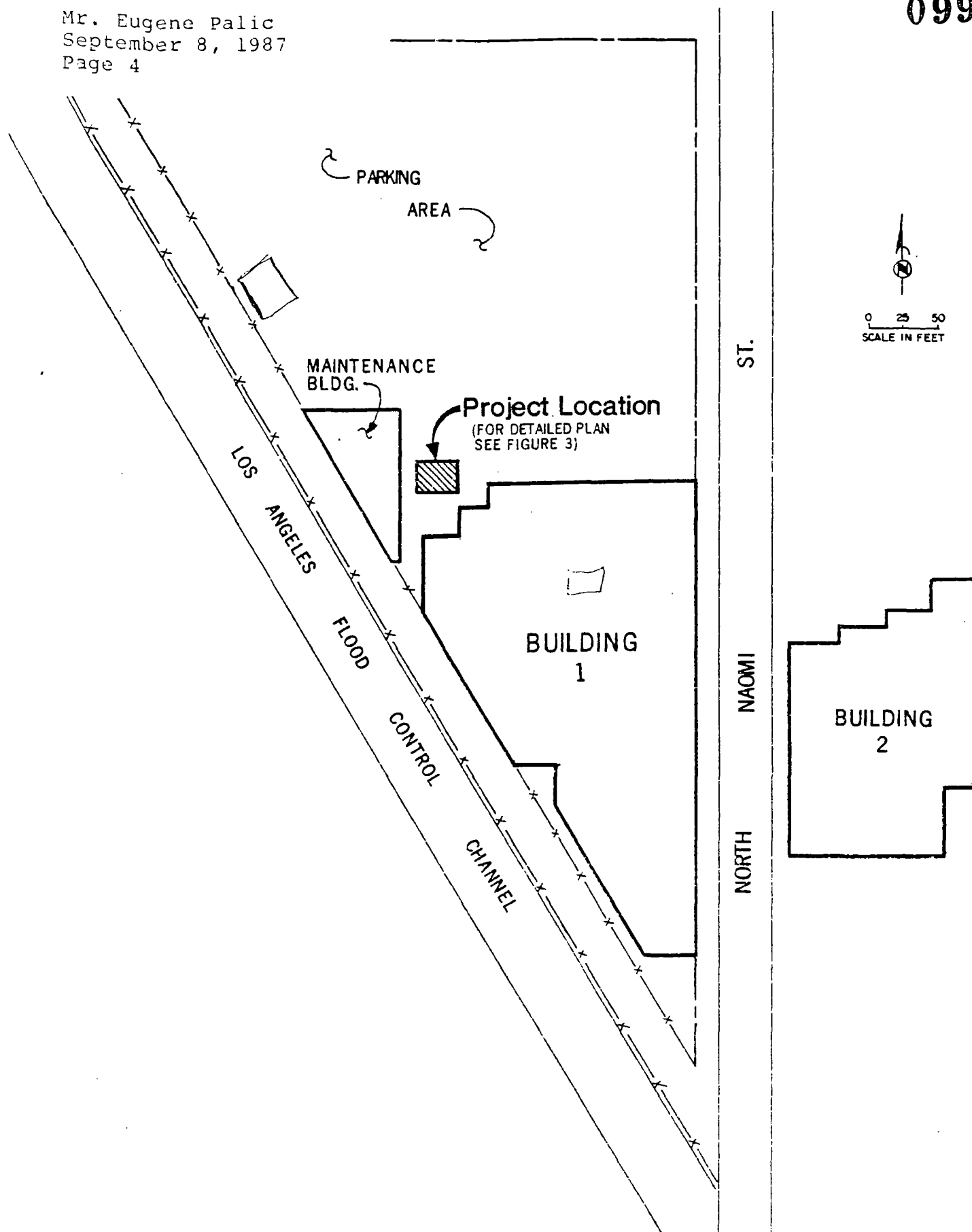


Figure 2 Facility Plan and Project Location

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0 5 10  
SCALE IN FEET

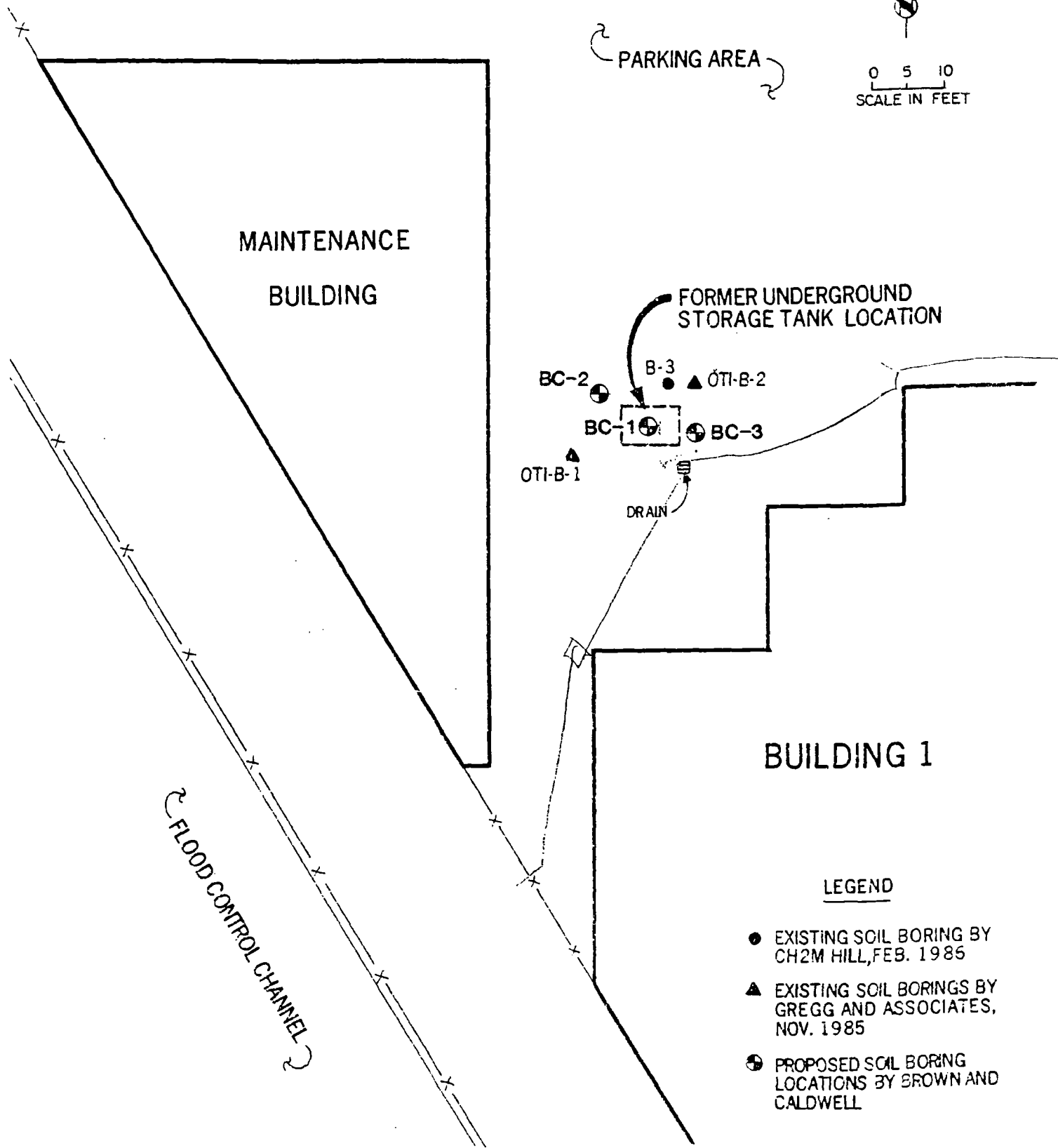


Figure 3 Underground Storage Tank Location and Proposed Soil Boring Locations

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area be backfilled and compacted in order for a drill-rig to be safely positioned over the area.

Soil borings BC-2 and BC-3 will be located at the north-west and east ends of the previous underground tank location. Each borehole will be advanced to a depth of 10-feet below detectable contamination or to a depth of 60-feet, whichever is greater.

Prior to drilling each borehole, the hollow-stem augers and all down-hole equipment will be steam cleaned to prevent cross-contamination between boreholes. All cuttings generated during drilling will be collected in 55-gallon drums for subsequent disposal. The drums will be marked to identify the borehole number and date.

Sampling during the field investigation will include collection of subsurface soil samples for visual inspection and subsequent laboratory analysis. Soil samples will be collected at 5-foot intervals using a Mobile B-61 drill-rig equipped with 8 and 10-inch diameter continuous flight hollow stem augers and a modified California Drive Sampler. The sampler will be driven 18-inches below the bottom of the auger bit using a 140-pound hammer dropped 30-inches. The sampler will contain three 2-inch diameter, 6-inch long brass tubes for collection of samples. Prior to collection of each soil sample, the sampler and brass tubes will be cleaned with detergent and rinsed with clean water or steam cleaned to prevent introduction of any contaminants into the soil samples.

The lowermost sample in each sampler will be covered on each end with Teflon sheets, capped, sealed with electrical tape, and labeled with sample location and time. The samples will be stored on ice in an ice chest until their arrival at the Brown and Caldwell laboratory. Each sealed brass tube will also be placed in heavy duty sealed plastic bags to prevent any exposure to melt water. These procedures will minimize any loss of volatile constituents. The uppermost soil sample will be described by the project hydrogeologist using the Unified Soils Classification System (USCS) on standard borehole logs.

Criteria for selecting the samples to be sent for analysis will involve screening by obtaining field measurements of organic vapors within a soil sample. The middle brass tube of each sample interval will be monitored for organic vapors by first discarding the upper 1-inch of the sample and subsequently capping both ends with plastic caps. One cap will have a slit at the top to allow a reading to be taken in the airspace between the cap and the soil. The reading will be taken with the small diameter probe of a Century Organic Vapor Analyzer (OVA), Model OVA 128. The OVA will be calibrated to measure TCA at 100

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percent. The maximum organic vapor concentration detected will be recorded on the borehole log. The soil samples selected for laboratory analysis from each borehole will be the sample intervals exhibiting the highest concentrations. In addition, the sampling interval immediately above the watertable if encountered, will be analyzed for verification. It is not expected to encounter the watertable due to the 150 to 200 foot expected depth of groundwater in the area.

Soil samples will be analyzed for purgeable halocarbons by USEPA Method 3240, with a detection limit of 0.3 milligrams per kilogram (mg/kg). Both TCA and isopropyl alcohol are detectable by this method. In addition, QA/QC data sheets will be submitted with the analytical report. Only discrete samples will be taken and analyzed. Samples will not be composited.

If groundwater is reached before contamination ceases, a groundwater monitoring well will be installed in the BC-1 borehole to collect and analyze groundwater samples for purgeable halocarbons. The monitoring well will be installed in a 10-inch-diameter hollow-stem auger borehole to a maximum depth of 20-feet below the water table or to the top of the first competent clay layer below the water table, whichever is shallower. A clay layer 5 feet thick or more is considered a competent clay layer. To reduce the potential for cross-contaminating water bearing zones, no boreholes will be completed through the first competent clay layer beneath the water table during this phase of the investigation. If a borehole is drilled 5-feet into a clay layer, below the water table, the well casing will be assembled at that depth.

The well will be constructed by installing 4-inch-diameter Schedule 80 polyvinyl chloride (PVC) casing and screen directly through the augers. The screen will have 0.020-inch slots and will extend a maximum of 20-feet below the watertable. The top of the screened interval will extend a minimum of 10-feet above the watertable.

Typical monitoring well construction details are presented in Figure 4. To provide a filter pack, imported No. 3 silica sand will be slowly poured directly through the augers as they are gradually removed from the borehole. To prevent caving of natural materials into the borehole, no more than 5-feet of auger will be removed from the borehole at one time. The filter pack will extend to approximately 20 feet above the top of the screened interval. Approximately one foot of 3/8-inch bentonite pellets will be poured through the augers immediately above the filter pack and hydrated to form an annular seal. The remaining annular space will be filled with neat cement-benseal grout. A traffic lock box will be set in concrete approximately 1/4-inch above grade.



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Following completion of well construction activities, the monitoring well will be developed by surging, bailing, and pumping until the discharge water contains less than 10 ppm settleable solids. After well development is completed, a minimum of 3 well volumes of liquid will be removed from the well by pumping prior to collection of a groundwater sample. Measurements of pH, temperature, and specific conductance will be taken at regular intervals during pumping of the well and a sample collected only after these parameters have stabilized. All water produced during well development and sampling activities will be discharged into 55-gallon drums and stored on-site for subsequent disposal.

A groundwater sample will be collected with a Teflon bailer. Samples will be discharged into clean sample containers supplied by the analytical laboratory. The samples will be placed in a cooled ice chest at the time of collection and will remain chilled on ice through delivery to the laboratory.

Sample identification and chain-of-custody procedures will be utilized for all samples collected during the field investigation to document sample possession from the time of collection to its ultimate disposal and to ensure sample integrity. Each sample container submitted for analysis will have a label affixed to identify the job number, sampler, date and time of collection, sample number unique to the sample, and type of analysis requested. This information, in addition to a description of the sample, any field measurements made, the sampling methodology, names of the on-site personnel, and any other pertinent field observations will be recorded on the borehole log.

A chain-of-custody form will be used to record possession of the sample from the time of collection to its arrival at the laboratory. Upon arrival at the laboratory, person in custody of the samples will relinquish them to the laboratory by signing the chain-of-custody form and noting the date and time of transferral. The laboratory's control officer will verify sample integrity and confirm that all samples were collected in the proper containers, that adequate sample volumes were collected, and that proper sample preservation procedures were utilized. If these conditions are satisfied, the sample will be assigned a unique log number for identification throughout analysis and reporting. The log number will be recorded on the chain-of-custody form and in the legally required log book Brown and Caldwell maintains at the laboratory. The sample description, date received, client's name, and any other relevant information will also be recorded.

Following completion of field activities and analyses of soil and groundwater samples collected during the field investigation, a report will be prepared for Ocean Technology Incorporated's

submittal to the LARWQCB. The report will document any monitoring well construction, the soil and groundwater sampling procedures and data, analytical methods, and analytical results. The report will describe the type of soils present beneath the site to the completed boring depths. Conclusions and recommendations for additional work to further determine the extent of these constituents, or any remedial measures, will be made as necessary.

All work for this subsurface site investigation will be done under the supervision of a California Registered Geologist. The analytical laboratory to be used for all analyzing by the Brown and Caldwell Laboratory, located in Pasadena, is certified by the State Department of Health Services to provide such services.

We suggest upon your review of this workplan, that you please forward a copy to the Los Angeles Regional Water Quality Control Board, 107 South Broadway, Suite 4027, Los Angeles, California, 90012-4596.

If you have any questions or comments regarding this work plan, please contact one of the undersigned at 818-577-1020.

Very truly yours,

BROWN AND CALDWELL

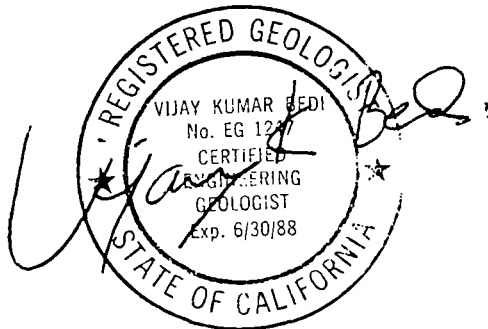


Steven J. Pratt  
Project Manager



Lisa A. Maserjian  
Project Hydrogeologist

LAM:fa



# Appendix A

## PERTINENT DATA

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address OCEAN TECHNOLOGY INC. 2835 N. NAOMI, BURBANK, CA		1. Generator's US EPA ID No. CA00411653821001		A. State Manifest Document Number 85033365		
4. Generator's Phone (818) 843-8771		91504		B. State Generator's ID		
5. Transporter 1 Company Name CROSBY & OVERTON EMI		6. US EPA ID Number CA0981461064		C. State Transporter's ID 703721		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 313/432-5445		
9. Designated Facility Name and Site Address CROSBY & OVERTON PLANT #1 1610 W. 16th St. LONG BEACH, CA 90813		10. US EPA ID Number CA0028409019		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 213/432-5445		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.	
a. NA 9189 HAZARDOUS WASTE SOLID, NOS ORM-E		001	100400	P	181	
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above EMPTY STORAGE TANK FORMERLY CONTAINED 1,1,1 TRICHLOROETHANE UPPER CONCENTRATION 0.50 LOWER 1ppm		K. Handling Codes for Wastes Listed Above R01				
15. Special Handling Instructions and Additional Information WEAR A NIOSH APPROVED ORGANIC VAPOR RESPIRATOR WHILE HANDLING		ALTERNATE TSD CASMALIA RESOURCES CASMALIA, CALIF. CA0020748125 805 / 437-8449				
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.						
Printed/Typed Name E. PALIC		Signature E. Palic			Date 9/26/86	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature Craig V. Halckroms			Date 9/26/86	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature			Date	
Printed/Typed Name		Signature			Date	
19. Discrepancy Indication Space STEAMED & SENT TO WILMINGTON SALVAGE						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name ROBERT MEYER		Signature Robert Meyer			Date 09/26/86	

YELLOW: TSDS SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

Glenn Adams DATE 9-17-86  
TO ARRANGE FOR AN INSPECTION, TELEPHONE (408) 514-6211

CLOSURE PERMIT SUPPLEMENT  
HAZARDOUS MATERIALS UNDERGROUND STORAGE  
LOS ANGELES COUNTY  
DEPARTMENT OF PUBLIC WORKS  
WASTE MANAGEMENT DIVISION  
2250 ALCAZAR STREET  
LOS ANGELES, CALIFORNIA 90033

Closure Permit  
No. 1936 B  
File No.  
I-10180-3E

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for Closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.
2. For each SP, samples shall be obtained at the following depths:

SP	Depth(s)	Compounds	Analysis Method
<u>1</u>	<u>2' below tank invert</u>	<u>tank contents</u>	

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report.
4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed.
5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb).
6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis.
7. All soil/groundwater samples obtained shall be handled and transported to a laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.
8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present.
9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever

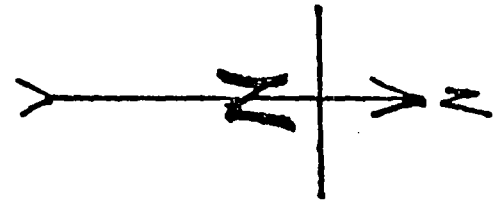
ULCIV TECHNOLOGY, INC.  
2835 No. NAOMI ST.  
Burbank, CA. 91504

HYDRAULIC RESEARCH CORP

550

⊗

PARKING LOT



GUARD  
HOUSE

MAIN  
GATE

NAOMI ST.

0995

**Harding Lawson Associates**

**Engineers, Geologists  
& Geophysicists**



**0995**

UNDERGROUND TANK INVESTIGATION  
2835 NORTH NAOMI STREET  
BURBANK, CALIFORNIA

HLA Job No. 17876,001.11



Harding Lawson Associates

A Report Prepared for

Ocean Technology, Inc.  
2835 North Naomi Street  
Burbank, California 91504

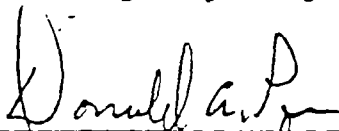
UNDERGROUND TANK INVESTIGATION  
2835 NORTH NAOMI STREET  
BURBANK, CALIFORNIA

HLA Job No. 17876,001.11

by



Gary J. Halbert, C.E.G. - 1318  
Senior Hydrogeologist



Donald A. Pape, C.E.G. - 1190  
Associate Hydrogeologist

Harding Lawson Associates  
15621 Redhill Avenue, Suite 100  
Tustin, California 92680  
714/259-7992

November 24, 1986

Harding Lawson Associates

## INTRODUCTION

This report presents the results of a soil investigation conducted during the removal of a 550-gallon underground storage tank at Ocean Technology, Inc. (OTI) facilities located at 2835 North Naomi Street in Burbank, California (Plate 1). The investigation was performed by Harding Lawson Associates (HLA) and was authorized by OTI through HLA's Service Agreement, dated May 20, 1986.

## BACKGROUND

General

The Burbank OTI property was acquired from Hydraulic Research Corporation (HRC) in July, 1973. The site is located in an industrial area at the eastern margin of the San Fernando Valley. The subject facilities are used by OTI primarily for design and assembly of electronic components.

Burbank Fire Department records indicate a 550-gallon underground tank was installed by HRC in 1965 for storage of machine cutting oil. OTI records indicate the tank has been used to store waste 1,1,1-Trichloroethane (TCA) and isopropyl alcohol (IPA) since OTI occupied the property. According to documented

manifests, reportedly on file with OTI, the tank was emptied four times; in 1977, 1979, 1981, and 1985. OTI's inventory summary (Appendix A) gives a breakdown of the purchase, usage, and disposal of 1,1,1-Trichloroethane and Isopropyl Alcohol from 1977 to 1985.

We understand that, in an effort to comply with Los Angeles County Department of Public Works (LACDPW) guidelines for underground storage of hazardous materials (enacted October 1984), OTI has undertaken the following:

1. In March 1985, the 550-gallon underground storage tank was emptied and sealed by the Oil Process Company of Los Angeles. Plans were made to remove the tank according to then-existing regulatory guidelines.
2. In September 1985, during the initial tank removal attempt, the empty tank was accidentally punctured. A representative of LACDPW, on site during removal, ordered the tank left in the ground and covered. LACDPW subsequently requested an investigation for possible underground leakage.
3. In early October 1985, a consultant (Gregg and Associates, Huntington Beach, California) conducted a sub-surface investigation. The investigation included two 40-foot-deep borings and laboratory analyses of soil samples. A report by Gregg and Associates describing that work has been provided to LACDPW by OTI. The boring logs and laboratory results from that report are included for reference in Appendices B and C, respectively.
4. Later in October 1985, a second consultant, CH2M HILL of Newport Beach, California, was retained to continue the investigation. In November 1985, CH2M HILL provided a proposed plan of action to OTI which was submitted to LACDPW.

Harding Lawson Associates

5. In February 1986, the work plan proposed by CH2M HILL was partially implemented by drilling and sampling one soil boring to a depth of 82 feet. A report describing the results of that work was not prepared. Draft copies of the CH2M HILL boring log and results of laboratory analyses soil samples are included for reference in Appendices B and C, respectively.

#### SCOPE OF WORK

In May 1986, HLA was retained by OTI to:

1. Review existing data and reports pertaining to site conditions and the history of the subject tank,
2. Assist OTI in arranging to have the tank removed,
3. Be present during tank removal to observe the condition of the tank and surrounding soils and to collect soil samples for laboratory analysis for volatile organics, and
4. Prepare this report.

Crosby and Overton/EMI (C&O/EMI) of Garden Grove, California was contracted by OTI to prepare a work plan and to remove the tank.

#### FIELD ACTIVITIES

The tank-removal work plan was approved by the LACDPW and the tank removal by C&O/EMI on September 26, 1986. A representative of the Burbank Fire Department was present during tank

removal. Mr. Joe Biacco of LACDPW was notified of the tank removal, but declined to attend.

An HLA geologist was present during the tank removal to record observations and take soil samples. Soil overlying the tank was excavated with a backhoe. The backhoe was used to remove the tank. Excavated soil was monitored with a photo-ionization detector (PID) equipped with a 10.2 million electron volt lamp calibrated against a benzene standard.

Two soil samples were collected from the excavation using the backhoe. One sample was selected from immediately beneath the tank at about 6 feet below original ground surface (Sample S-1); and another from 2 feet beneath the tank at about 8 feet below ground surface (Sample S-2).

The samples were placed in sealed glass jars, stored in a cooler with "Blue Ice," and delivered that day to Brown and Caldwell Laboratories in Pasadena, California.

The excavated soil (approximately 15 cubic yards) was left in a covered pile near the tank excavation.

## SITE CONDITIONS

### General

The geology and ground-water conditions at the site have been described in the November 1985 Proposed Plan of Action

prepared by CH2M HILL. Briefly, the site is located in an industrial area at the eastern margin of the San Fernando Valley Ground Water Basin. The site is underlain by several hundred feet of Quaternary-age, granular alluvium. Existing literature indicates that unconfined ground water is approximately 185 feet below the ground surface, and that ground water in this area flows to the south<sup>1</sup>.

According to CH2M Hill, no active ground-water extraction wells are located within 1 mile of the site. One 2-inch-diameter monitoring well, maintained by LACDPW (Well No. 4969B), is located approximately 1000 feet south of the site.

#### Site Soils

A site plan is shown on Plate 2. The two boring logs (OTI-B-1 and OTI-B-2 in Appendix B) from the October 1985 Gregg and Associates report indicated soils beneath the paved tank area consist of silty sand to a depth of at least 6 feet, underlain by sand with little fines to a depth of 40 feet.

A draft copy of the field log of the CH2M HILL Boring B-3 was provided to HLA by OTI (included in Appendix B). The log indicates silty sand to a depth of 5 feet with sand, gravel, and

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1. County of Los Angeles Case No. 650079, "Water Master Service in the Upper Los Angeles River Area", 1984.

cobbles extending from 5 feet to the bottom of the boring at 82 feet.

HLA's observations during tank removal in September 1986 indicate that the tank backfill consisted of moist, brown, silty sand with cobbles. The tank backfill appeared to be the same as natural soils surrounding the tank pit. The soils around the tank had a moderate solvent or alcohol odor with PID readings of 0 to 5 units.

#### Tank Condition

During the September 1986 tank removal, HLA observed that the empty tank was in a deteriorated state. The tank had several large holes, from damage during an earlier backhoe removal attempt (September 1985). The tank was finally removed in dismembered sections.

The tank was also deteriorated from corrosion. Mr. Lou Stone of the Burbank Fire Department commented that the tank appeared to be more corroded than when he observed it during the first removal attempt in September, 1985.

#### Laboratory Analysis

HLA soil samples S-1 and S-2, taken from beneath the tanks, were analyzed for volatile organics and isopropyl alcohol by EPA

Harding Lawson Associates

Method 8240. The results of analyses are presented in Table 1. Laboratory test reports are given in Appendix C.

Table 1. Laboratory Results

	Concentration (mg/kg)	
	S-1	S-2
1,1,1-Trichloroethane	5	6
C-3 chlorinated hydrocarbon	8	10

Notes: mg/kg = milligrams per kilogram  
only constituents that were detected are listed

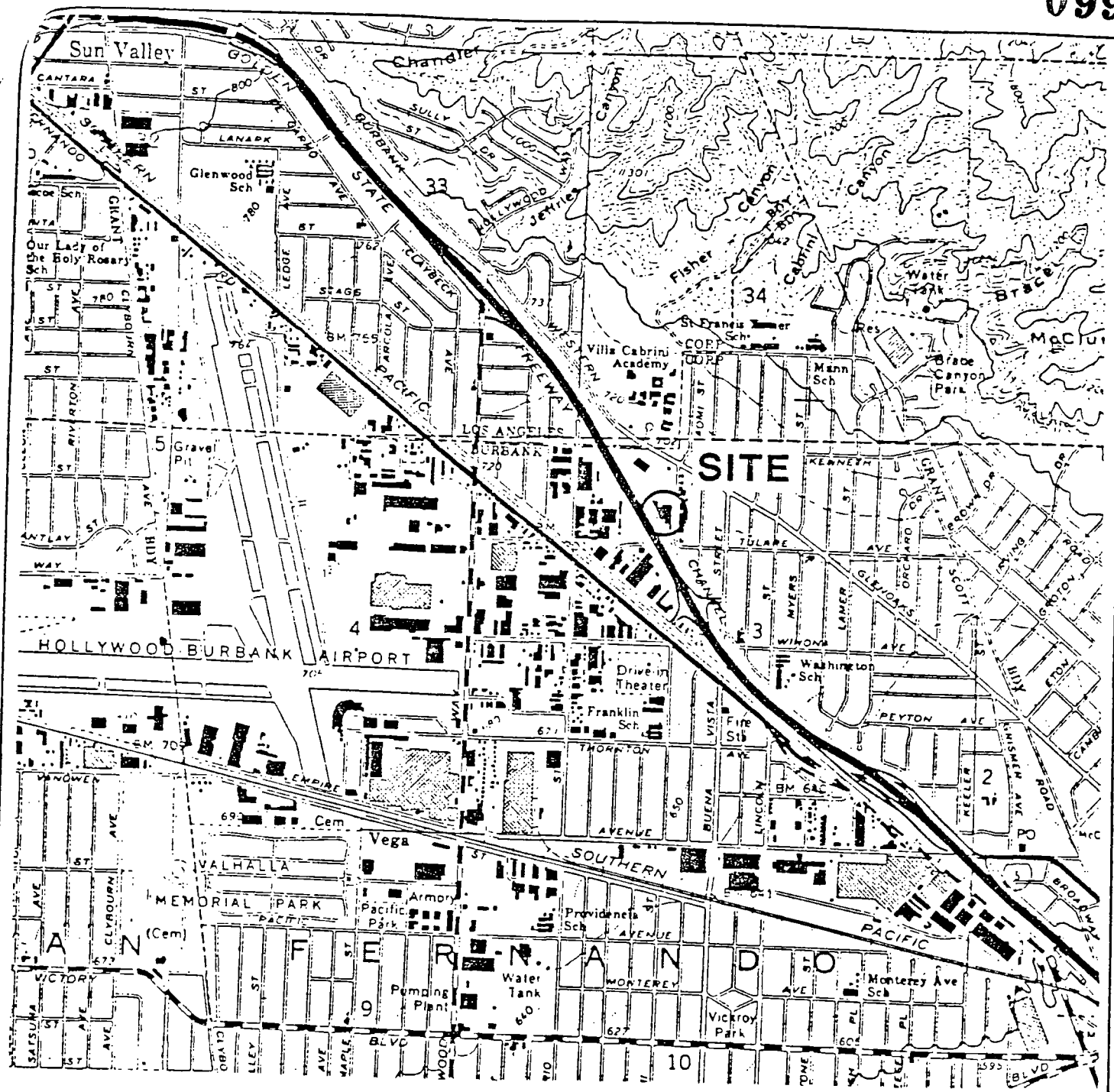
Both samples showed two compounds above detectable limits: 1,1,1-Trichloroethane (TCA) and an undifferentiated C-3 chlorinated (non-priority pollutant) compound. Isopropyl alcohol was not detected.

For reference, the previously-unreported results of laboratory analyses of samples from CH2M HILL Boring B-3 are included in Appendix C. Samples from 30 feet, 50 feet, and 70 feet were analyzed for oil and grease (EPA Method 418.1), isopropyl alcohol, and purgeable priority pollutants (EPA Method 8010). In summary, three analytes were detected in the 30-foot sample, whereas none of the analytes were detected in the two deeper samples. The three compounds detected at 30 feet were: oil and grease (170 mg/kg), isopropyl alcohol (140 mg/kg) and acetone (140 mg/kg).



Harding Lawson Associates

Also included for reference in Appendix C is a copy of the results of laboratory analyses performed on soil samples taken from Borings OTI-B-1 and OTI-B-2. The laboratory report and the consultant's summary were excerpted from Gregg and Associates' report (dated October 21, 1985) which we understand is on file with appropriate regulatory agencies. The samples were analyzed for purgeable priority pollutants by EPA method 8010. Only TCA was reported. Briefly, a composite soil sample from OTI-B-1 contained 0.0007 mg/kg TCA. TCA was detected at 6.2 mg/kg at 5 feet, 12 mg/kg at 10 feet, and 520 mg/kg at 30 feet. The remaining samples at 15, 20 and 40 feet were all reported as less than 1 mg/kg TCA.



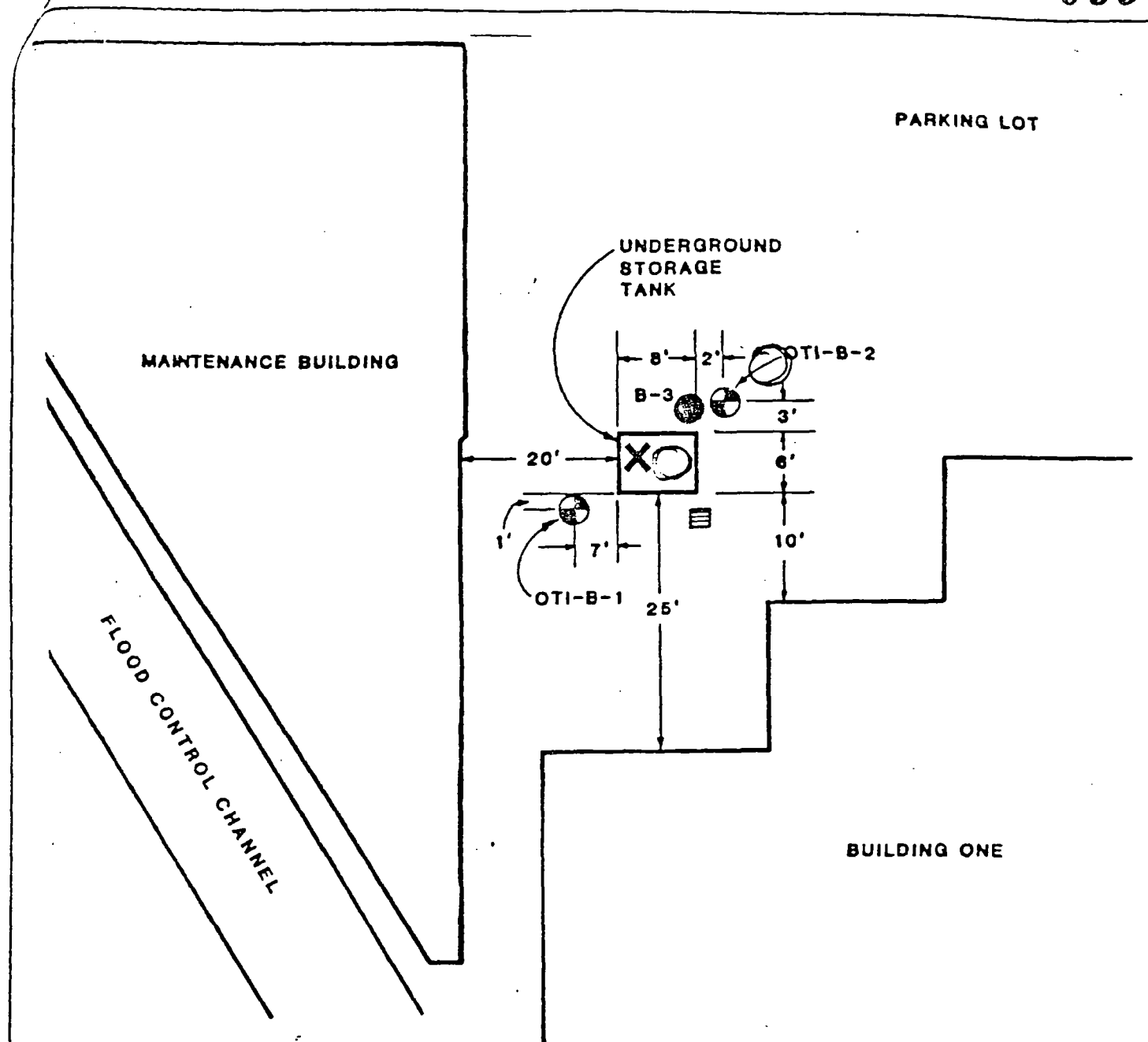
Reference: USGS 7.5-minute quadrangle, Burbank, California  
(photorevised 1972)



**Harding Lawson Associates**  
Engineers, Geologists  
& Geophysicists


**VICINITY MAP**  
Ocean Technology, Inc.  
Burbank, California

PLATE  
**1**



### EXPLANATION

OTI-B-2  Borings drilled by Gregg and Associates, November, 1985

B-3  Boring drilled by CH2M HILL, February, 1986

X HLA samples S-1 and S-2, September, 1986

NOT TO SCALE



**Harding Lawson Associates**  
Engineers, Geologists  
& Geophysicists


**SITE PLAN**  
Ocean Technology, Inc.  
Burbank, California

PLATE

**2**

DRAWN  
11

JOB NUMBER  
17876.001.11

APPROVED  


DATE  
10-31-86

REVISED

DATE

APPENDIX A

Harding Lawson Associates

APPENDIX A

OTI Chemical Purchase/Disposal Analysis

# Departmental Correspondence

0995

Date 9 June 1986

To E. Palic From V. Spaccia <sup>MS</sup>

Subject: CHEMICAL PURCHASE/DISPOSAL ANALYSIS

The following figures are a breakdown of the purchase, usage and disposal of the chemicals Trichlorethane 1.1.1 and Isopropyl Alcohol during the period from 7/01/77 to 4/17/85. All records prior to this time have been destroyed.

## Trichlorethane 1.1.1:

Total Purchased	3,350.00 gal.
Total Usage (48.15%)	1,612.94 gal.
Balance	<u>1,737.06 gal.</u>

## Isopropyl Alcohol:

Total Purchased	1,199.00 gal.
Total Usage (72.72%)	871.97 gal.
Balance (Waste)	<u>327.03 gal.</u>

## Combined Results:

Trichlorethane 1.1.1	1,737.06 gal.
Isopropyl Alcohol	327.03 gal.
Total Possible Storage	<u>2,064.09 gal.</u>
Actually Disposed Of	1,950.00 gal.
Seepage Loss	<u>114.09 gal.</u>

The percentage breakdown of the disposed chemicals (recycled) is 84.16% Trichlorethane 1.1.1 and 15.84% Isopropyl Alcohol. The gallon equivalent of that would be 96.02 gallons of Trichlorethane 1.1.1 and 18.07 gallons of Isopropyl Alcohol.

APPENDIX B

H2M  
HILL

PROJECT NUMBER

N20391, B0

BOL...ING NUMBER

3

SHEET 1 of 4

## SOIL BORING LOG

PROJECT OT 1

LOCATION BURBANK

ELEVATION

DRILLING CONTRACTOR GREGG DRILLING &amp; TESTING

DRILLING METHOD AND EQUIPMENT

Hollow STEM AUGER - MOBILE DRILL Model B-53

WATER LEVEL AND DATE

START 0940

FINISH 1830

LOGGER D. MARK

ELEVATION	DEPTH BELOW SURFACE	SAMPLE			STANDARD PENETRATION TEST RESULTS 6"-6'-6" (N)	SOIL DESCRIPTION NAME, GRADATION OR PLASTICITY, PARTICLE SIZE DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS TESTS AND INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER	RECOVERY				
	5'					Most silty fine-medium sand.		Drilling easy. Driller indicates soil was very dry the last time he drilled at site. Moisture apparently due to open excavation above tank and recent rains.
	10'					Med.-coarse sand with pebbles. Fairly clean - little silt & clay		
	10'	3-10	Lab		21 blows/ft	Med.-coarse sand with pebbles and cobbles. Very little silt and clay. Slightly moist, but little internal cohesion due to large grain size. @ 10 1/2 numerous cobbles. Fewer cobbles after ≈ 12'		Slower drilling due to cobbles. Faster drilling - fewer cobbles
	15'							
	20'							
	20'	3-20	Lab		20 blows/ft	Med.-coarse sand with ≈ 5-10% pebbles and occasional cobble. Moderately well sorted - little silt and clay (silt and clay combined < 5%). Slightly damp.		Fairly easy drilling except when run into cobbles
	25'					occasional cobble		constant drilling rate
	25'							slower drilling
	30'					28-29' more cobbles		easier drilling
	30'	3-30	Lab		21 blows/ft	-see next page		

DRAFT



12M  
HILL

PROJECT NUMBER

N20391.30

BLANKING NUMBER

3

SHEET 2 of 4

0995

## SOIL BORING LOG

PROJECT OTI

LOCATION BURBANK

ELEVATION

DRILLING CONTRACTOR GREGG DRILLING &amp; TESTING

DRILLING METHOD AND EQUIPMENT Hollow Stem AUGER

WATER LEVEL AND DATE

START

FINISH

LOGGER D. MARK

ELEVATION	DEPTH BELOW SURFACE	SAMPLE			STANDARD PENETRATION TEST RESULTS 6"-6"-6" (IN)	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		INTERVAL	TYPE AND NUMBER	RECOVERY		NAME, GRADATION OR PLASTICITY, PARTICLE SIZE DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY, USCS GROUP SYMBOL		DEPTH OF CASING DRILLING RATE, DRILLING FLUID LOSS TESTS AND INSTRUMENTATION
	35'					Same material - slightly higher % silt (still < 5%). More consolidated with depth, but still very little internal cohesion.  few cobbles  very few cobbles		Easy drilling - occasional cobble
	40'		3-40	Lcb	34 blows/ft	Fine - coarse sand with fewer pebbles (2-3%). Well sorted - < 2-3% silt & clay  very few cobbles.		Easy drilling
	45'					more cobbles		
	50'		3-50	Lcb	60 blows/ft	Fine - coarse sand with 3-5% pebbles and occasional cobbles. Mostly med. sand.		cobbles significantly increase blow count and inhibit ability to get drive sample.
			3-52	K. med.	85 blows/ft	Moderately sorted - higher silt and clay fraction (max. 5%), slightly moist.		
	55'					occasional cobbles.		
	60'		3-60	Lcb	40 blows/ft	more cobbles and pebbles - see next page		

CH2M  
HILL

PROJECT NUMBER N20391.80	BORING NUMBER 3	SHEET 3 of 4
SOIL BORING LOG		

PROJECT OT1 LOCATION BURBANK  
 ELEVATION \_\_\_\_\_ DRILLING CONTRACTOR GROGG Drilling & Testing  
 DRILLING METHOD AND EQUIPMENT HOLLOW STEM AUGER  
 WATER LEVEL AND DATE \_\_\_\_\_ START \_\_\_\_\_ FINISH \_\_\_\_\_ LOGGER D. MARK

ELEVATION	DEPTH BELOW SURFACE	SAMPLE			STANDARD PENETRATION TEST RESULTS 6"-6"-6" (IN)	SOIL DESCRIPTION NAME, GRADATION OR PLASTICITY, PARTICLE SIZE DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER	RECOVERY				
						Silty very fine to fine sand. Moist - cohesive. Very little clay (<1%). Few pebbles (1%).		Still drilling easy ≈ 2' / minute
65'						DRAFT		
70'								
		3-70	Lab		35 blows/ft	silty very fine to fine sand (slightly coarser). Moist - cohesive. Little clay (<1-2%). Few small pebbles. Slight reddish tint (previously med. brown - drying to light brown)		
		3-72	K <sub>unat</sub>		22 blows/ft			
75'						cuttings: mostly pebbles with fine sand and silt matrix. More moisture.		Very hard drilling - rig chattering. Very slow - ≈ 1' / hr.
		3-75	Lab		70 blows / 1 1/2 in.			Very little material retrieved in 75' drive sample. Slightly easier drilling at 76'
80'						coarse sand and pebbles. Little silt (<5%). Numerous cobbles.		
		3-80	Lab		90 blows/ft			
85'						Boulders		Very slow drilling - boulders
								@ 87' part of pad supporting pad collapses - back excavated - not properly backfilled. Had to pull up 2' to re-support rig. Lost 2' of hole and large boulder comes into hole.

PROJECT NUMBER N20391.80	BORING NUMBER 3	SHEET 4 OF 4
SOIL BORING LOG		

PROJECT OTI LOCATION BURBANK  
ELEVATION \_\_\_\_\_ DRILLING CONTRACTOR GRIGG DRILLING & TESTING  
DRILLING METHOD AND EQUIPMENT HOLLOW STEM AUGER  
WATER LEVEL AND DATE \_\_\_\_\_ START \_\_\_\_\_ FINISH \_\_\_\_\_ LOGGER D. MARK

ELEVATION	DEPTH BELOW SURFACE	SAMPLE			STANDARD PENETRATION TEST RESULTS 6"-6'-6" (IN)	SOIL DESCRIPTION NAME, GRADATION OR PLASTICITY, PARTICLE SIZE DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS TESTS AND INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER	RECOVERY				
								<p>No progress in 1 hr + Borehole abandoned. Backfilled hole with "5-sack mix".</p> <p>Soil samples taken to lab (Brown &amp; Caldwell).</p>

**DRAFT**

Harding Lawson Associates

APPENDIX B

Boring Logs

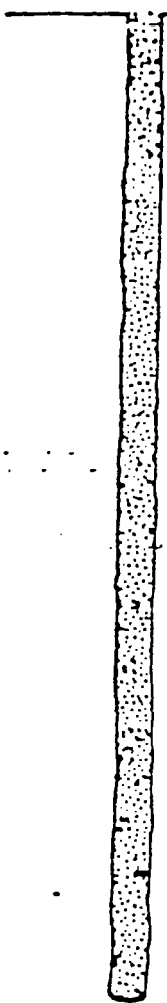
OIT-B-1, OTI-B-2, Gregg and Associates, November 1985  
B-3 CH2M HILL, February 1986 (Draft)

CONSTRUCTION DETAILS	DEPTH	LOG	BLOW CNTS	LITHOLOGIC DESCRIPTION
Gastech (ppm)	- 0 -	5/1/17		-Asphalt, 2 inches
6	- 3 -		5	-Silty sand, sp, w/pebbles fine grain, brown, moist medium dense,
23	- 6 -			-Silty sand, sp, fine to to coarse grain, brown, dense
17	- 9 -		23	
18	- 12 -			
	- 15 -		17	-Sand (sp) fine to coarse grain, light brown, moist, dense
	- 18 -		25	-Increased density occasional pebbles
	- 21 -			
	- 24 -			
	- 27 -			
0	- 30 -		50+	-Sample not retained in 4 attempts, auger cuttings used for sample
	- 33 -			
	- 36 -			
0	- 39 -		40+	-Sand, sp, fine to coarse grain, light brown, moist dense
	- 42 -			

COMPLETION & BACKFILL  
-Backfilled native  
material, 0-40 ft

BORING NUMBER OTIB1

Prepared for  
OCEAN TECHNOLOGIES, INC.  
by  
GREGG & ASSOCIATES, INC.

CONSTRUCTION DETAILS	DEPTH	LOG	BLOW CNTS	LITHOLOGIC DESCRIPTION
 <p>Gastech (ppm)</p> <p>0</p> <p>500+</p> <p>500+</p> <p>300+</p> <p>500+</p> <p>500+</p>	- 0 -	500+		-Asphalt, 2 inches
	- 3 -			-Sand, sp, fine grain, light brown, medium dens
	- 6 -		7	
	- 9 -			-Silty sand, sp, fine to to med grain, w/pebbles and cobbles, brown, moist
	- 12 -		15	medium dense,
	- 15 -		36	
	- 18 -			-Sand (sp) med to coarse grain, with cobbles and pebbles, brown to dark
	- 21 -		40	brown, moist, medium dens. strong odor,
	- 24 -			
	- 27 -			
	- 30 -		80+	
	- 33 -			
	- 36 -			
	- 39 -			
	- 42 -		45	

COMPLETION & BACKFILL  
-Backfilled concrete and  
bentonite, 0-40 ft

BORING NUMBER OTIB2

Prepared for  
OCEAN TECHNOLOGIES, INC.  
by  
GREGG & ASSOCIATES, INC.

Harding Lawson Associates

## APPENDIX C

### Laboratory Analyses

S-1, S-2, Harding Lawson Associates, September 1986  
B-3 CH2M HILL, February 1986  
OTI-B-1, OTI-B-2, Gregg and Associates, October 1986

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

LOG NO: P86-09-546

Received: 26 SEP 86

Reported: 14 OCT 86

Gary Halbert  
Harding Lawson Associates  
15621 Redhill Ave., Suite 100  
Tustin, California 92680

Project: 17876,001.11

## REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
09-546-1	S-1	26 SEP 86	
09-546-2	S-2	26 SEP 86	
PARAMETER		09-546-1	09-546-2
Purgeable Priority Pollutants			
Extraction		10/09/86	10/09/86
1,1,1-Trichloroethane, mg/kg		5	6
1,1,2,2-Tetrachloroethane, mg/kg		<0.3	<0.3
1,1,2-Trichloroethane, mg/kg		<0.3	<0.3
1,1-Dichloroethane, mg/kg		<0.3	<0.3
1,1-Dichloroethylene, mg/kg		<0.3	<0.3
1,2-Dichloroethane, mg/kg		<0.3	<0.3
1,2-Dichloropropane, mg/kg		<0.3	<0.3
1,3-Dichloropropene, mg/kg		<0.3	<0.3
2-Chloroethylvinylether, mg/kg		<0.3	<0.3
Acrolein, mg/kg		<3	<3
Acrylonitrile, mg/kg		<3	<3
Bromodichloromethane, mg/kg		<0.3	<0.3
Bromomethane, mg/kg		<0.3	<0.3
Benzene, mg/kg		<0.3	<0.3
Chlorobenzene, mg/kg		<0.3	<0.3
Carbon Tetrachloride, mg/kg		<0.3	<0.3
Chloroethane, mg/kg		<0.3	<0.3
Bromoform, mg/kg		<0.3	<0.3
Chloroform, mg/kg		<0.3	<0.3
Chloromethane, mg/kg		<0.3	<0.3
Dibromochloromethane, mg/kg		<0.3	<0.3
Ethylbenzene, mg/kg		<0.3	<0.3
Methylene Chloride, mg/kg		<0.3	<0.3
Tetrachloroethylene, mg/kg		<0.3	<0.3



0995

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

RECEIVED  
FEB-12-1988CH2M HILL  
SOUTHERN CALIFORNIA OFFICE

LOG NO: PB6-02-030

Received: 03 FEB 86

Reported: 10 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-030-1	B-3-30	03 FEB 86
PARAMETER	02-030-1	
Oil & Grease by Infrared, mg/kg	170	
Isopropyl Alcohol, mg/kg	140	

LOG NO: P86-09-546

Received: 26 SEP 86

Reported: 14 OCT 86

Gary Halbert  
Harding Lawson Associates  
15621 Redhill Ave., Suite 100  
Tustin, California 92680


Project: 17876,001.11

## REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
09-546-1	S-1	26 SEP 86	
09-546-2	S-2	26 SEP 86	
PARAMETER		09-546-1	09-546-2
Trichloroethylene, mg/kg		<0.3	<0.3
Trichlorofluoromethane, mg/kg		<0.3	<0.3
Toluene, mg/kg		<0.3	<0.3
Vinyl Chloride, mg/kg		<0.3	<0.3
trans-1,2-Dichloroethylene, mg/kg		<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg		<0.3	<0.3
Isopropyl Alcohol, mg/kg		<0.3	<6
Semi-Quantified Results **			
A C3 Chlorinated Compound, mg/kg		8	10

\*\* Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

  
Edward Wilson, Laboratory Director

LOG NO: P86-02-030

Received: 03 FEB 86

Reported: 10 FEB 86

John Dolegowski  
 CH2M.HILL  
 1301 Dove Street, Suite 800  
 Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-030-1	B-3-30	03 FEB 86
PARAMETER	02-030-1	
EPA Method 8010		
Date Extracted	02/07/86	
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	
1,1,2-Trichloroethane, mg/kg	<0.3	
1,1-Dichloroethane, mg/kg	<0.3	
1,1-Dichloroethene, mg/kg	<0.3	
1,2-Dichloroethane, mg/kg	<0.3	
trans-1,2-Dichloroethene, mg/kg	<0.3	
1,2-Dichloropropane, mg/kg	<0.3	
2-Chloroethylvinylether, mg/kg	<0.3	
Bromodichloromethane, mg/kg	<0.3	
Bromomethane, mg/kg	<0.3	
Bromoform, mg/kg	<0.3	
Chlorobenzene, mg/kg	<0.3	
Carbon Tetrachloride, mg/kg	<0.3	
Chloroethane, mg/kg	<0.3	
Chloroform, mg/kg	<0.3	
Chloromethane, mg/kg	<0.3	
Dibromochloromethane, mg/kg	<0.3	
Dichlorodifluoromethane, mg/kg	<0.3	
Methylene chloride, mg/kg	<0.3	
Tetrachloroethene, mg/kg	<0.3	
1,1,1-Trichloroethane, mg/kg	<0.3	

LOG NO: P86-02-030

Received: 03 FEB 86

Reported: 10 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-030-1	B-3-30	03 FEB 86
PARAMETER	02-030-1	
Trichloroethylene, mg/kg	<0.3	
Trichlorofluoromethane, mg/kg	<0.3	
Vinyl chloride, mg/kg	<0.3	
cis-1,3-Dichloropropene, mg/kg	<0.3	
trans-1,3-Dichloropropene, mg/kg	<0.3	
Other EPA Method 8010,	<0.3	
Acetone, mg/kg	140	

  
Edward Wilson, Laboratory Director

BROWN AND CALDWELL



ANALYTICAL LABORATORIES

LOG NO: P86-02-037

Received: 03 FEB 86

Reported: 19 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-037-1	B-3-50	03 FEB 86
PARAMETER	02-037-1	
Oil & Grease by Infrared, mg/kg	<10	
Purgeable Priority Pollutants		
Extraction	02/14/86	
Acrolein, mg/kg	<3	
Acrylonitrile, mg/kg	<3	
Other Purgeable Priority Pollutants,	<0.3	

LOG NO: P86-02-037

Received: 03 FEB 86

Reported: 19 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-037-3	B-3-70	03 FEB 86
PARAMETER	02-037-3	
Oil & Grease by Infrared, mg/kg	<10	
Purgeable Priority Pollutants		
Extraction	02/14/86	
Acrolein, mg/kg	<3	
Acrylonitrile, mg/kg	<3	
Other Purgeable Priority Pollutants,	<0.3	

LOG NO: PB6-02-037

Received: 03 FEB 86

Reported: 19 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.B0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-037-4	B-3-10	03 FEB 86
02-037-5	B-3-20	03 FEB 86
02-037-6	B-3-60	03 FEB 86
02-037-7	B-3-40	03 FEB 86

PARAMETER	02-037-4	02-037-5	02-037-6	02-037-7
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD

LOG NO: P86-02-037

Received: 03 FEB 86

Reported: 19 FEB 86

John Dolegowski  
CH2M.HILL  
1301 Dove Street, Suite 800  
Newport Beach, California 92660

Project: N20391.E0

## REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOIL SAMPLES	DATE SAMPLED
02-037-2	B-3-80	
PARAMETER		02-037-2
Sample Held, Not Analyzed		HOLD

---

Edward Wilson, Laboratory Director



Results of laboratory analyses performed on the soil samples collected from the two borings are tabulated below. The laboratory report from Analytical Technologies, Inc. is included in Appendix B. In the laboratory report, a typographic error was made. The report states that the soil samples were analyzed for 1,1,1 - Tetrachloroethane (TCA). Upon receiving those results Gregg & associates, Inc. questioned ATI and found that a typographic error had been made and in fact the soil samples were analyzed for 1,1,1 Trichloroethane as requested. At the time this report was compiled, the corrected laboratory results report was not available, but will be forwarded when possible.

TABLE 1

BORING	DEPTH (FEET)	CONCENTRATION OF 1,1,1-TRICHLOROETHANE (PPM) → PPB
OTI-B-1	5, 10, 15, 20, 30, 40 (composite)	0.7
OTI-B-2	5	6200
	10	12000
	15	130
	20	150
	30	520,000
	40	150



ATI I.D. 28301

October 17, 1985

Gregg & Associates  
18351 Beach Blvd. Suite L  
Huntington Beach, California 92634

Attention : Pat Keating

Project No. : 85-154-001

On October 9, 1985, Analytical Technologies, Inc. received sixteen (16) soil samples in good condition. Six (6) samples from boring B1 were composited into one sample. The composite and the samples from boring B2 were analyzed for 1,1,1-tetrachloroethane (TCA).

The analysis of TCA was performed by gas chromatography/mass detector in accordance with EPA method 8010.

The results of the TCA analysis were reported to Pat Keating on October 16, 1985, by Liz Shigley of ATI.

The results of the TCA analyses are enclosed and the results for the PCB's will be sent at a later date.

*Tiair K. Augsburg*

Tiair K. Augsburg  
Technical Associate

Reviewed by :

*Mari King*  
Mari King  
Laboratory Director

Note: The samples from this project will be disposed of thirty (30) days from the date of this report unless we are informed otherwise.

ANALYTICAL TECHNOLOGIES, INC.

ATI I.D. 28301

1,1,1- TETRACHLOROETHANE  
DATA SHEETCLIENT : GREGG & ASSOCIATES  
DATE RECEIVED : 10-9-85  
DATE REPORTED : 10-17-85  
PROJECT NO. : 85-154-001SAMPLE MATRIX : SOIL  
METHOD : EPA 8010  
DATE ANALYZED : 10-16-85  
UNITS : ug/Kg

ATI SAMPLE I.D.	CLIENT SAMPLE I.D.	TCA	SURROGATE RECOVERY %
5-10	B1 COMPOSITE	1000.7	72.8
11	B2-5'	6200	92.7
12	B2-10'	12000	107
13	B2-15'	130	75.2
14	B2-20'	150	67.8
15	B2-30'	20000	*
16	B2-40'	150	56.1

\* DIRECT INJECTION- NO SURROGATE ADDED.

Harding Lawson Associates

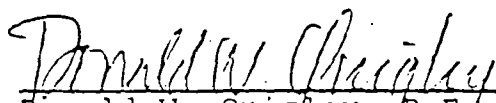
## DISTRIBUTION

4 copies to:

Ocean Technology, Inc.  
2835 North Naomi Street  
Burbank, California 91504

Attention: Mr. Gene Palic

QUALITY CONTROL REVIEWER:

  
Donald W. Quigley, P.E.  
Principal Engineer

GJH/DAP/DWQ/slb